



(완전복구)Hot backup을 사용하여 모든 data file 복구

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|-------|----|
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순서

0. hot_20240304_2 디렉토리 생성
1. data file전체 hot backup을 수행하고
2. scott 유저에서 dept_cuppang 테이블을 ts01 테이블 스페이스에 생성
3. dept_cuppang 테이블에 데이터를 입력하고, log switch를 일으키는 작업 3번 수행
4. shutdown abort로 DB 내리기
5. 모든 data file들을 전부 삭제한 후 startup 한 이후에 복원, 복구

0. shm DB로 접속합니다.

```
$
[orcl:~]$ . oraenv
ORACLE_SID = [orcl] ? shm
The Oracle base for ORACLE_HOME=/u01/app/oracle/product/11.2.0/dbhome_1 is /u01/app/oracle
[shm:~]$
```

```
[orcl:~]$ . oraenv
ORACLE_SID = [orcl] ? shm
The Oracle base for ORACLE_HOME=/u01/app/oracle/product/11.2.0/dbhome_1 is /u01/app/oracle
```

1. hot backup을 수행합니다. - 쉘로 만들어서 수행

- a. hot backup을 수행하기 위해 begin backup script 추출하기
- b. TEMPORARY TABLESPACE는 begin backup할 필요가 없음.
왜? 혹시라도 장애가나서 삭제되면, startup할 때 알아서 복구됨. 때문에 우리가 백업해줄 필요가 없음

```
select 'alter tablespace ' || tablespace_name || ' begin backup;'
from dba_tablespaces
where tablespace_name != 'TEMP';
```

```
'ALTER TABLESPACE' || TABLESPACE_NAME || ' BEGIN BACKUP;'
```

```
-----  
alter tablespace SYSTEM begin backup;  
alter tablespace SYSAUX begin backup;  
alter tablespace UNDOTBS1 begin backup;  
alter tablespace USERS begin backup;  
alter tablespace EXAMPLE begin backup;  
alter tablespace TS01 begin backup;  
alter tablespace TS02 begin backup;  
alter tablespace TS03 begin backup;  
alter tablespace CUPPANG01 begin backup;  
alter tablespace CUPPANG02 begin backup;  
alter tablespace CUPPANG03 begin backup;
```

```
11 rows selected.
```

```
# 스크립트 수행하기
```

```
alter tablespace SYSTEM begin backup;  
alter tablespace SYSAUX begin backup;  
alter tablespace UNDOTBS1 begin backup;  
alter tablespace USERS begin backup;  
alter tablespace EXAMPLE begin backup;  
alter tablespace TS01 begin backup;  
alter tablespace TS02 begin backup;  
alter tablespace TS03 begin backup;  
alter tablespace CUPPANG01 begin backup;  
alter tablespace CUPPANG02 begin backup;  
alter tablespace CUPPANG03 begin backup;
```

```

shm SYS > select 'alter tablespace ' || tablespace_name || ' begin backup;'
          from dba_tablespaces
          where tablespace_name != 'TEMP'; 2    3

'ALTERTABLESPACE' || TABLESPACE_NAME || 'BEGINBACKUP;'
-----
alter tablespace SYSTEM begin backup;
alter tablespace SYSAUX begin backup;
alter tablespace UNDOTBS1 begin backup;
alter tablespace USERS begin backup;
alter tablespace EXAMPLE begin backup;
alter tablespace TS01 begin backup;
alter tablespace TS02 begin backup;
alter tablespace TS03 begin backup;
alter tablespace CUPPANG01 begin backup;
alter tablespace CUPPANG02 begin backup;
alter tablespace CUPPANG03 begin backup;

11 rows selected.

shm SYS >

shm SYS >
shm SYS > alter tablespace SYSTEM begin backup;
alter tablespace SYSAUX begin backup;
alter tablespace UNDOTBS1 begin backup;
alter tablespace USERS begin backup;
alter tablespace EXAMPLE begin backup;
alter tablespace TS01 begin backup;
alter tablespace TS02 begin backup;
alter tablespace TS03 begin backup;
alter tablespace CUPPANG01 begin backup;
alter tablespace CUPPANG02 begin backup;
alter tablespace CUPPANG03 begin backup;
Tablespace altered.

shm SYS >
Tablespace altered.

```

c. backup mode에 있는지 확인하기

```

shm SYS >

select * from v$backup;

FILE# STATUS              CHANGE# TIME
-----
1 ACTIVE                  98016007 04-MAR-24
2 ACTIVE                  98016013 04-MAR-24
3 ACTIVE                  98016019 04-MAR-24
4 ACTIVE                  98016025 04-MAR-24
5 ACTIVE                  98016031 04-MAR-24
6 ACTIVE                  98016025 04-MAR-24
7 ACTIVE                  98016038 04-MAR-24
8 ACTIVE                  98016044 04-MAR-24
9 ACTIVE                  98016051 04-MAR-24
10 ACTIVE                 98016057 04-MAR-24
11 ACTIVE                 98016064 04-MAR-24

```

| FILE# | STATUS | CHANGE# | TIME |
|-------|--------|----------|-----------|
| 12 | ACTIVE | 98016070 | 04-MAR-24 |

12 rows selected.

```
shm SYS > select * from v$backup;
```

| FILE# | STATUS | CHANGE# | TIME |
|-------|--------|----------|-----------|
| 1 | ACTIVE | 98016007 | 04-MAR-24 |
| 2 | ACTIVE | 98016013 | 04-MAR-24 |
| 3 | ACTIVE | 98016019 | 04-MAR-24 |
| 4 | ACTIVE | 98016025 | 04-MAR-24 |
| 5 | ACTIVE | 98016031 | 04-MAR-24 |
| 6 | ACTIVE | 98016025 | 04-MAR-24 |
| 7 | ACTIVE | 98016038 | 04-MAR-24 |
| 8 | ACTIVE | 98016044 | 04-MAR-24 |
| 9 | ACTIVE | 98016051 | 04-MAR-24 |
| 10 | ACTIVE | 98016057 | 04-MAR-24 |
| 11 | ACTIVE | 98016064 | 04-MAR-24 |

| FILE# | STATUS | CHANGE# | TIME |
|-------|--------|----------|-----------|
| 12 | ACTIVE | 98016070 | 04-MAR-24 |

12 rows selected.

하나라도 not active가 있으면 안됨

- d. OS에서 `/home/oracle/hot_20240304_2` 디렉토리를 생성한 후 cp 스크립트 추출하여, data file을 copy 한다.

```
# 1. 디렉토리 생성하기
[shm:~]$ mkdir /home/oracle/hot_20240304_2

[shm:~]$ ls -ld hot_20240304_2
drwxr-xr-x 2 oracle oinstall 4096  3월  4 10:59 hot_20240304_2

-----

# 2. cp 스크립트 생성하기 ( /home 앞에 반드시 한 칸 띄어야함)
select 'cp ' || file_name || ' /home/oracle/hot_20240304_2/'
from dba_data_files;

'CP' || FILE_NAME || '/HOME/ORACLE/HOT_20240304_2/'
-----

cp /u01/app/oracle/oradata/shm/ts01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/users02.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/example01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/users01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/undotbs01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/sysaux01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/system01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/ts02.dbf /home/oracle/hot_20240304_2/
```

```
cp /u01/app/oracle/oradata/shm/ts03.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/cuppang01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/cuppang02.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/cuppang03.dbf /home/oracle/hot_20240304_2/
```

12 rows selected.

3. 스크립트 돌리기

```
cp /u01/app/oracle/oradata/shm/ts01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/users02.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/example01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/users01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/undotbs01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/sysaux01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/system01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/ts02.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/ts03.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/cuppang01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/cuppang02.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/cuppang03.dbf /home/oracle/hot_20240304_2/
```

4. 잘 카피 되었는지 확인하기

```
[shm:~]$ cd hot_20240304_2
[shm:hot_20240304_2]$
[shm:hot_20240304_2]$ ls -l
합계 1763168
```

```
-rw-r----- 1 oracle oinstall    5251072  3월  4 11:00 cuppang01.dbf
-rw-r----- 1 oracle oinstall    5251072  3월  4 11:00 cuppang02.dbf
-rw-r----- 1 oracle oinstall    5251072  3월  4 11:00 cuppang03.dbf
-rw-r----- 1 oracle oinstall 104865792  3월  4 11:00 example01.dbf
-rw-r----- 1 oracle oinstall  534781952  3월  4 11:00 sysaux01.dbf
-rw-r----- 1 oracle oinstall  713039872  3월  4 11:00 system01.dbf
-rw-r----- 1 oracle oinstall  10493952  3월  4 11:00 ts01.dbf
-rw-r----- 1 oracle oinstall  10493952  3월  4 11:00 ts02.dbf
-rw-r----- 1 oracle oinstall    5251072  3월  4 11:00 ts03.dbf
-rw-r----- 1 oracle oinstall  89137152  3월  4 11:00 undotbs01.dbf
-rw-r----- 1 oracle oinstall    5251072  3월  4 11:00 users01.dbf
-rw-r----- 1 oracle oinstall 314580992  3월  4 11:00 users02.dbf
```

```
shm SYS > select count(*)
          2      from dba_data_files;

COUNT(*)
-----
        12
```

```

[shm:~]$ cp /u01/app/oracle/oradata/shm/ts01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/sysaux01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/system01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/ts02.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/ts03.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/cuppang01.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/cuppang02.dbf /home/oracle/hot_20240304_2/
cp /u01/app/oracle/oradata/shm/cuppang03.dbf /home/oracle/hot_20240304_2/[shm:~]$ cp /u01/a
pp/oracle/oradata/shm/users02.dbf /home/oracle/hot_20240304_2/
[shm:~]$ cp /u01/app/oracle/oradata/shm/example01.dbf /home/oracle/hot_20240304_2/
[shm:~]$ cp /u01/app/oracle/oradata/shm/users01.dbf /home/oracle/hot_20240304_2/
[shm:~]$ cp /u01/app/oracle/oradata/shm/undotbs01.dbf /home/oracle/hot_20240304_2/
[shm:~]$ cp /u01/app/oracle/oradata/shm/sysaux01.dbf /home/oracle/hot_20240304_2/
[shm:~]$ cp /u01/app/oracle/oradata/shm/system01.dbf /home/oracle/hot_20240304_2/
[shm:~]$ cp /u01/app/oracle/oradata/shm/ts02.dbf /home/oracle/hot_20240304_2/
[shm:~]$ cp /u01/app/oracle/oradata/shm/ts03.dbf /home/oracle/hot_20240304_2/
[shm:~]$ cp /u01/app/oracle/oradata/shm/cuppang01.dbf /home/oracle/hot_20240304_2/
[shm:~]$ cp /u01/app/oracle/oradata/shm/cuppang02.dbf /home/oracle/hot_20240304_2/
[shm:~]$ cp /u01/app/oracle/oradata/shm/cuppang03.dbf /home/oracle/hot_20240304_2/
[shm:~]$
[shm:~]$
[shm:~]$ cd hot_20240304_2
[shm:hot_20240304_2]$
[shm:hot_20240304_2]$ ls -l
합계 1763168
-rw-r----- 1 oracle oinstall 5251072 3월 4 11:00 cuppang01.dbf
-rw-r----- 1 oracle oinstall 5251072 3월 4 11:00 cuppang02.dbf
-rw-r----- 1 oracle oinstall 5251072 3월 4 11:00 cuppang03.dbf
-rw-r----- 1 oracle oinstall 104865792 3월 4 11:00 example01.dbf
-rw-r----- 1 oracle oinstall 534781952 3월 4 11:00 sysaux01.dbf
-rw-r----- 1 oracle oinstall 713039872 3월 4 11:00 system01.dbf
-rw-r----- 1 oracle oinstall 10493952 3월 4 11:00 ts01.dbf
-rw-r----- 1 oracle oinstall 10493952 3월 4 11:00 ts02.dbf

```

```

shm SYS > select count(*)
          2      from dba_data_files;

COUNT(*)
-----
          12

```

공간 없으면 dbca로 지워버리기 (orcl도 지워버리면 됨.,무서움)

e. end_backup을 수행하는 스크립트 추출하기

```

# 1. script 추출하기
select 'alter tablespace ' || tablespace_name || ' end backup;'
from dba_tablespaces
where tablespace_name != 'TEMP';

'ALERTTABLESPACE' || TABLESPACE_NAME || 'ENDBACKUP;'
-----
alter tablespace SYSTEM end backup;
alter tablespace SYSAUX end backup;
alter tablespace UNDOTBS1 end backup;
alter tablespace USERS end backup;
alter tablespace EXAMPLE end backup;

```

```

alter tablespace TS01 end backup;
alter tablespace TS02 end backup;
alter tablespace TS03 end backup;
alter tablespace CUPPANG01 end backup;
alter tablespace CUPPANG02 end backup;
alter tablespace CUPPANG03 end backup;

```

11 rows selected.

2. 스크립트 수행하여 end_backup 하기

```

shm SYS > select 'alter tablespace ' || tablespace_name || ' end backup;'
          from dba_tablespaces
          where tablespace_name != 'TEMP'; 2      3

'ALERTABLESPACE'||TABLESPACE_NAME||'ENDBACKUP;'
-----
alter tablespace SYSTEM end backup;
alter tablespace SYSAUX end backup;
alter tablespace UNDOTBS1 end backup;
alter tablespace USERS end backup;
alter tablespace EXAMPLE end backup;
alter tablespace TS01 end backup;
alter tablespace TS02 end backup;
alter tablespace TS03 end backup;
alter tablespace CUPPANG01 end backup;
alter tablespace CUPPANG02 end backup;
alter tablespace CUPPANG03 end backup;

11 rows selected.

```

```

shm SYS > alter tablespace SYSTEM end backup;
alter tablespace SYSAUX end backup;
alter tablespace UNDOTBS1 end backup;
alter tablespace USERS end backup;
alter tablespace EXAMPLE end backup;
alter tablespace TS01 end backup;
alter tablespace TS02 end backup;
alter tablespace TS03 end backup;
alter tablespace CUPPANG01 end backup;
alter tablespace CUPPANG02 end backup;
alter tablespace CUPPANG03 end backup;
Tablespace altered.

shm SYS >
Tablespace altered.

shm SYS >
Tablespace altered.

shm SYS >
Tablespace altered.

shm SYS >
Tablespace altered.

shm SYS >
Tablespace altered.

shm SYS >
Tablespace altered.

shm SYS >
Tablespace altered.

shm SYS >
Tablespace altered.

shm SYS >

```

f. backup mode → 일반 모드로 변경되었는지 확인하기

```
select * from v$backup;
```



```
shm SYS > select * from v$backup;
```

| FILE# | STATUS | CHANGE# | TIME |
|-------|------------|----------|-----------|
| 1 | NOT ACTIVE | 97992808 | 04-MAR-24 |
| 2 | NOT ACTIVE | 97992815 | 04-MAR-24 |
| 3 | NOT ACTIVE | 97992822 | 04-MAR-24 |
| 4 | NOT ACTIVE | 97992828 | 04-MAR-24 |
| 5 | NOT ACTIVE | 97992834 | 04-MAR-24 |
| 6 | NOT ACTIVE | 97992828 | 04-MAR-24 |
| 7 | NOT ACTIVE | 97992840 | 04-MAR-24 |
| 8 | NOT ACTIVE | 97992846 | 04-MAR-24 |
| 9 | NOT ACTIVE | 97992852 | 04-MAR-24 |
| 10 | NOT ACTIVE | 97992858 | 04-MAR-24 |
| 11 | NOT ACTIVE | 97992864 | 04-MAR-24 |
| | | | |
| FILE# | STATUS | CHANGE# | TIME |
| 12 | NOT ACTIVE | 97992870 | 04-MAR-24 |

```
12 rows selected.
```

2. **scott** 유저에서 테이블을 생성합니다.

```
shm SYS >

connect scott/tiger

shm SCOTT >

create table dept_cupbang
tablespace ts01
as
    select * from dept;

shm SCOTT > select count(*) from dept_cupbang;

COUNT(*)
-----
4
```

```

shm SYS > connect scott/tiger
Connected.
shm SCOTT >
shm SCOTT > create table dept_cuppang
tablespace ts01
as
        select * from dept; 2    3    4

Table created.

shm SCOTT >
shm SCOTT >
shm SCOTT > select count(*) from dept_cuppang;

COUNT(*)
-----
         4

```

3. 데이터를 입력하고 log switch를 여러번(3번) 일으킵니다.

- scott에 권한 없으면 sys에서 dba 권한 주고 수행하기
- 현업 처럼 수행해보기 위해서 백업 이후에 여러 행동을 했다는 것을 인식시켜주기 위함

```

shm SCOTT >

insert into dept_cuppang
        select * from dept_cuppang;

alter system swith logfile; -- @logsw

```

```

shm SCOTT > insert into dept_cuppang
        select * from dept_cuppang; 2

4 rows created.

shm SCOTT > @logsw

System altered.

shm SCOTT > insert into dept_cuppang
        select * from dept_cuppang; 2

8 rows created.

shm SCOTT > logsw
SP2-0042: unknown command "logsw" - rest of line ignored.
shm SCOTT >
shm SCOTT > @logsw

System altered.

shm SCOTT >
shm SCOTT > insert into dept_cuppang
        select * from dept_cuppang; 2

16 rows created.

shm SCOTT > @logsw

System altered.

```

4. sys유저에서 DB를 내리고, 모든 data file들을 전부 삭제합니다.

- a. 데이터이 파일이 있는 곳으로 이동해야함. 단 하나라도 다른 곳에 있으면 안됨! 하나라도 /home/oracle/ 아래에 있으면 그 것도 백업 시켜줘야함. 모두 ini설 밑에 있어야함.

```
shm SCOTT >
connect / as sysdba

# data file위치 확인하기
shm SYS >
  select file_name from dba_data_files; -- @datafile

FILE_NAME
-----
/u01/app/oracle/oradata/shm/ts01.dbf
/u01/app/oracle/oradata/shm/users02.dbf
/u01/app/oracle/oradata/shm/example01.dbf
/u01/app/oracle/oradata/shm/users01.dbf
/u01/app/oracle/oradata/shm/undotbs01.dbf
/u01/app/oracle/oradata/shm/sysaux01.dbf
/u01/app/oracle/oradata/shm/system01.dbf
/u01/app/oracle/oradata/shm/ts02.dbf
/u01/app/oracle/oradata/shm/ts03.dbf
/u01/app/oracle/oradata/shm/cuppang01.dbf
/u01/app/oracle/oradata/shm/cuppang02.dbf

FILE_NAME
-----
/u01/app/oracle/oradata/shm/cuppang03.dbf

12 rows selected.
```

```
shm SYS > @datafile

FILE_NAME
-----
/u01/app/oracle/oradata/shm/ts01.dbf
/u01/app/oracle/oradata/shm/users02.dbf
/u01/app/oracle/oradata/shm/example01.dbf
/u01/app/oracle/oradata/shm/users01.dbf
/u01/app/oracle/oradata/shm/undotbs01.dbf
/u01/app/oracle/oradata/shm/sysaux01.dbf
/u01/app/oracle/oradata/shm/system01.dbf
/u01/app/oracle/oradata/shm/ts02.dbf
/u01/app/oracle/oradata/shm/ts03.dbf
/u01/app/oracle/oradata/shm/cuppang01.dbf
/u01/app/oracle/oradata/shm/cuppang02.dbf

FILE_NAME
-----
/u01/app/oracle/oradata/shm/cuppang03.dbf

12 rows selected.
```

- b. 해당 위치로 이동해서 *.dbf 로 끝나는 data file들 삭제하기
- a. 단, log file과 ctl file은 삭제되면 안됨! 삭제 후 남아있는지 확인하기

#1. db를 내리기 -- 삭제 후 내려도 되긴 함
shm SYS > shutdown abort

#2. datafile이 있는 위치로 이동 후 rm으로 *.dbf로 끝나는 datafile들 삭제하기

```
[shm:~]$ cd /u01/app/oracle/oradata/shm/
[shm:shm]$
[shm:shm]$ ls
control01.ctl  cuppang03.dbf  redo02.log    system01.dbf  ts02.dbf      users01.dbf
cuppang01.dbf  example01.dbf  redo03.log    temp01.dbf    ts03.dbf      users02.dbf
cuppang02.dbf  redo01.log     sysaux01.dbf  ts01.dbf      undotbs01.dbf

[shm:shm]$ rm *.dbf
[shm:shm]$
[shm:shm]$ ls
control01.ctl  redo01.log  redo02.log  redo03.log
```

```
[shm:~]$ cd /u01/app/oracle/oradata/shm/
[shm:shm]$
[shm:shm]$ ls
control01.ctl  cuppang03.dbf  redo02.log    system01.dbf  ts02.dbf      users01.dbf
cuppang01.dbf  example01.dbf  redo03.log    temp01.dbf    ts03.dbf      users02.dbf
cuppang02.dbf  redo01.log     sysaux01.dbf  ts01.dbf      undotbs01.dbf
[shm:shm]$
[shm:shm]$ rm *.dbf
[shm:shm]$
[shm:shm]$ ls
control01.ctl  redo01.log  redo02.log  redo03.log
```

5. DB를 STARTUP 합니다.

a. 데이터 파일이 없기 때문에 mount까지만 올라가고 올라가지 않음

```
shm SYS > startup
ORACLE instance started.

Total System Global Area  636100608 bytes
Fixed Size                  1338392 bytes
Variable Size             184550376 bytes
Database Buffers          444596224 bytes
Redo Buffers                5615616 bytes
Database mounted.
ORA-01157: cannot identify/lock data file 1 - see DBWR trace file
ORA-01110: data file 1: '/u01/app/oracle/oradata/shm/system01.dbf'
```

```

shm SYS > startup
ORACLE instance started.

Total System Global Area  636100608 bytes
Fixed Size                  1338392 bytes
Variable Size              184550376 bytes
Database Buffers           444596224 bytes
Redo Buffers                5615616 bytes
Database mounted.
ORA-01157: cannot identify/lock data file 1 - see DBWR trace file
ORA-01110: data file 1: '/u01/app/oracle/oradata/shm/system01.dbf'

```

⇒ data file을 전부 삭제했는데 system01만 뜬! 그래서 복구해야할 파일 list를 보여달라고 오라클에게 아래와 같이 요청해야 함

방법 1 : 번호만 나와서 상세하게 알아보기 어렵다.

```
shm SYS >
```

```
select * from v$recover_file;
```

| FILE# | ONLINE | ONLINE_ | ERROR | CHANGE# | TIME |
|-------|--------|---------|----------------|---------|------|
| 1 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 2 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 3 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 4 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 5 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 6 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 7 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 8 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 9 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 10 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 11 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |

| FILE# | ONLINE | ONLINE_ | ERROR | CHANGE# | TIME |
|-------|--------|---------|----------------|---------|------|
| 12 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |

방법 2 : @need_recovery 로 저장하기 -- 앞으로 백업 복구 시 많이 쓸 것

```
shm SYS >
```

```
col name for a50
```

```

select r.file#, d.name
  from v$recover_file r, v$datafile d
 where r.file# = d.file#
    and error='FILE NOT FOUND';

```

| FILE# | NAME |
|-------|--|
| 1 | /u01/app/oracle/oradata/shm/system01.dbf |

```

2 /u01/app/oracle/oradata/shm/sysaux01.dbf
3 /u01/app/oracle/oradata/shm/undotbs01.dbf
4 /u01/app/oracle/oradata/shm/users01.dbf
5 /u01/app/oracle/oradata/shm/example01.dbf
6 /u01/app/oracle/oradata/shm/users02.dbf
7 /u01/app/oracle/oradata/shm/ts01.dbf
8 /u01/app/oracle/oradata/shm/ts02.dbf
9 /u01/app/oracle/oradata/shm/ts03.dbf
10 /u01/app/oracle/oradata/shm/cuppang01.dbf
11 /u01/app/oracle/oradata/shm/cuppang02.dbf

```

FILE# NAME

```

-----
12 /u01/app/oracle/oradata/shm/cuppang03.dbf

```

```

shm SYS > col error for a20
shm SYS > select * from v$recover_file;

```

| FILE# | ONLINE | ONLINE_ | ERROR | CHANGE# | TIME |
|-------|--------|---------|----------------|---------|------|
| 1 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 2 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 3 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 4 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 5 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 6 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 7 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 8 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 9 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 10 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| 11 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |
| | | | | | |
| FILE# | ONLINE | ONLINE_ | ERROR | CHANGE# | TIME |
| 12 | ONLINE | ONLINE | FILE NOT FOUND | 0 | |

12 rows selected.

```
shm SYS > col name for a50
shm SYS > select r.file#, d.name
          from v$recover_file r, v$datafile d
          where r.file# = d.file#
          and error='FILE NOT FOUND'; 2    3    4

FILE# NAME
-----
1 /u01/app/oracle/oradata/shm/system01.dbf
2 /u01/app/oracle/oradata/shm/sysaux01.dbf
3 /u01/app/oracle/oradata/shm/undotbs01.dbf
4 /u01/app/oracle/oradata/shm/users01.dbf
5 /u01/app/oracle/oradata/shm/example01.dbf
6 /u01/app/oracle/oradata/shm/users02.dbf
7 /u01/app/oracle/oradata/shm/ts01.dbf
8 /u01/app/oracle/oradata/shm/ts02.dbf
9 /u01/app/oracle/oradata/shm/ts03.dbf
10 /u01/app/oracle/oradata/shm/cuppang01.dbf
11 /u01/app/oracle/oradata/shm/cuppang02.dbf

FILE# NAME
-----
12 /u01/app/oracle/oradata/shm/cuppang03.dbf

12 rows selected.
```

```
shm SYS > @need_recovery

FILE# NAME
-----
1 /u01/app/oracle/oradata/shm/system01.dbf
2 /u01/app/oracle/oradata/shm/sysaux01.dbf
3 /u01/app/oracle/oradata/shm/undotbs01.dbf
4 /u01/app/oracle/oradata/shm/users01.dbf
5 /u01/app/oracle/oradata/shm/example01.dbf
6 /u01/app/oracle/oradata/shm/users02.dbf
7 /u01/app/oracle/oradata/shm/ts01.dbf
8 /u01/app/oracle/oradata/shm/ts02.dbf
9 /u01/app/oracle/oradata/shm/ts03.dbf
10 /u01/app/oracle/oradata/shm/cuppang01.dbf
11 /u01/app/oracle/oradata/shm/cuppang02.dbf

FILE# NAME
-----
12 /u01/app/oracle/oradata/shm/cuppang03.dbf

12 rows selected.
```

6. 백업 받은 파일들을 복원합니다.

a. 백업 디렉토리로 가서 파일 복원하기

```
[shm:~]$ cd hot_20240304_2
[shm:hot_20240304_2]$
[shm:hot_20240304_2]$ ls
cuppang01.dbf cuppang03.dbf sysaux01.dbf ts01.dbf ts03.dbf users01.dbf
cuppang02.dbf example01.dbf system01.dbf ts02.dbf undotbs01.dbf users02.dbf
[shm:hot_20240304_2]$
[shm:hot_20240304_2]$ cp *.dbf /u01/app/oracle/oradata/shm/
[shm:hot_20240304_2]$
```

```
[shm:hot_20240304_2]$ cd /u01/app/oracle/oradata/shm/
[shm:shm]$
[shm:shm]$ ls *.dbf
cuppang01.dbf  cuppang03.dbf  sysaux01.dbf  ts01.dbf  ts03.dbf  users01.dbf
cuppang02.dbf  example01.dbf  system01.dbf  ts02.dbf  undotbs01.dbf  users02.dbf
```

```
[shm:~]$ cd hot_20240304_2
[shm:hot_20240304_2]$
[shm:hot_20240304_2]$ ls
cuppang01.dbf  cuppang03.dbf  sysaux01.dbf  ts01.dbf  ts03.dbf  users01.dbf
cuppang02.dbf  example01.dbf  system01.dbf  ts02.dbf  undotbs01.dbf  users02.dbf
[shm:hot_20240304_2]$
[shm:hot_20240304_2]$ cp *.dbf /u01/app/oracle/oradata/shm/
[shm:hot_20240304_2]$
[shm:hot_20240304_2]$ cd /u01/app/oracle/oradata/shm/
[shm:shm]$
[shm:shm]$ ls *.dbf
cuppang01.dbf  cuppang03.dbf  sysaux01.dbf  ts01.dbf  ts03.dbf  users01.dbf
cuppang02.dbf  example01.dbf  system01.dbf  ts02.dbf  undotbs01.dbf  users02.dbf
[shm:shm]$
```

7. 복원한 파일에 로그 파일을 적용해서 완전 복구를 합니다.

- specify log 를 어떻게 할지 물어보는데, auto라고 적으면 알아서 아카이브 로그 파일을 복원한 파일에 적용하여 최신 파일로 만들어줌

```
shm SYS >
recover database;
```

```
Specify log: {<RET>=suggested | filename | AUTO | CANCEL}
```

<--- auto라고 적기! 이렇게 적으면 알아서 아카이브 로그 파일을 복원한 파일에 적용합니다.

```
Log applied.
Media recovery complete.
```

```
shm SYS > recover database;
ORA-00279: change 98016007 generated at 03/04/2024 10:57:27 needed for thread 1
ORA-00289: suggestion :
/u01/app/oracle/flash_recovery_area/SHM/archivelog/2024_03_04/o1_mf_1_50_lybc51r
d_.arc
ORA-00280: change 98016007 for thread 1 is in sequence #50

Specify log: {<RET>=suggested | filename | AUTO | CANCEL}
auto
Log applied.
Media recovery complete.
```

8. db를 open합니다.

```
shm SYS >
alter database open;
```



```
shm SYS > alter database open  
Database altered.
```

9. **scott** 유저에서 생성한 테이블을 **select** 합니다.

```
shm SYS > connect scott/tiger  
Connected.  
  
shm SCOTT > select count(*) from dept_cupang;  
  
COUNT(*)  
-----  
32
```

```
shm SYS > connect scott/tiger  
Connected.  
shm SCOTT >  
shm SCOTT > select count(*) from dept_cupang;  
  
COUNT(*)  
-----  
32
```

최종 결과물

```
shm SYS > recover database;  
ORA-00279: change 98016007 generated at 03/04/2024 10:57:27 needed for thread 1  
ORA-00289: suggestion :  
/u01/app/oracle/flash_recovery_area/SHM/archivelog/2024_03_04/o1_mf_1_50_lybc51r  
d_.arc  
ORA-00280: change 98016007 for thread 1 is in sequence #50  
  
Specify log: {<RET>=suggested | filename | AUTO | CANCEL}  
auto  
Log applied.  
Media recovery complete.  
shm SYS >  
shm SYS >  
shm SYS > alter database open;  
  
Database altered.  
  
shm SYS >  
shm SYS > connect scott/tiger  
Connected.  
shm SCOTT >  
shm SCOTT > select count(*) from dept_cupang;  
  
COUNT(*)  
-----  
32
```

